5547

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ..... Office No. 5547

LOCALITY

State New York.

General locality Long Island

Locality Sound.

1934

CHIEF OF PARTY

J. E. Ruttenburg.

LIBRARY & ARCHIVES

DATE .....

B-1870-1 (1)++

5547

5547

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

11—5613

State: New York

DESCRIPTIVE REPORT.

Hydro. *Sheet No.* 5407 5547

LOCALITY:

Long Island Sound,

East Chester Bay,
(one word)
U.S.C.&G.S.

1934

CHIEF OF PARTY:

I. E. Rittenburg

Form 537
Ed. Dec., 1930

REG. NO. 5547

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. [illegible]

REGISTER NO. 5407 5547 ✓

State New York ✓

General locality Long Island Sound ✓

Locality [illegible] Bay, East/Chester Bay, [illegible] Bay, L. I. Sound ✓
H.B.

Scale 1 : 10,000 Date of survey June - August, 19 34 ✓

Vessel Shore Party # 15 ✓

Chief of Party I. E. Rittenburg ✓

Surveyed by M. D. Cooper, W. C. Huebner ✓

Protracted by A. E. Incledon

Soundings penciled by A. E. Incledon

Soundings in ~~[illegible]~~ feet

Plane of reference M. L. W. ✓

Subdivision of wire dragged areas by

Inked by [illegible]

Verified by [illegible]

Instructions dated June 13, 1934 (I. Rittenburg)
Mar. 23 1933 (H. A. Cotton)

Remarks:

U. S. GOVERNMENT PRINTING OFFICE: 1931

Landmarks attached to Descriptive Report of Topographic Sheets

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET 5407 LONG ISLAND SOUND EAST RIVER AND EAST CHESTER BAY, PROJECT H & T 186, 1934.

Authority.

This survey was done in accordance with instructions from the Director, dated June 13, 1934. Work was done during the months of June to Sept., inc., 1934.

Area covered and junctions.

This sheet covers the area in the East River from Old Ferry Point to Throgs Neck, the west side of Long Island Sound from Throgs Neck to a junction with H 5407, 1933, Cotton, at the south end of Hart Island, East Chester, Little, and Pelham Bays, vicinity of Execution Rocks L.H., to a junction with H 5407, Cotton 1933, and 1732 a (Whitney) and hydro. sheet field no. 2, 1934. In addition there were several scattered places where additional development was called for and shown on the boat sheet which was prepared for field use in the office. These places have been assigned numbers in red on the boat sheet and the type work desired is also shown on the red leaders to these areas. This sheet joins H 5333 on the west, hydro. sheet field no. 1 on the east side of the channel up Long Island Sound, H 5407, 1933, on the west and north and H 1732 a on the Northeast and field sheet No. 2, 1934 on the East at Sands Point. It is believed that a suitable junction was made with all the above mentioned sheets.

This all H work is combined in the survey of H 5407 (1933) Hyan

Control.

The triangulation control used was mostly that of R. W. Woodworth 1932. This was supplemented by various other triangulation by Coast & Geodetic Survey parties from 1835 to 1933. Topographic signals were located by this party and recoverable topographic stations located by H. A. Cotton 1933. The control was found to be excellent for good fixes. This sheet is on the North American Datum. Shoreline was taken from the topographic sheets of this party field letters A, B, & C, and from the topographic sheets of H. A. Cotton, 1933. Some of this latter topography was found to be slightly in error. Wherever possible this was corrected without too much time being spent as the aerial photographs are now in the process of compilation it was not believed that too much time should be spent of this checking of shoreline.

T 6025, 6026, 6027, 6010, 6011

Comparison with air-Photos will be made when available. Hyan

T 5089

Methods.

Standard methods were used throughout this survey. The usual practice of sextant fixes was employed, and soundings were all taken by hand lead. At times it was found feasable to use 2 sounding parties on this sheet. Hydrographic sheet Field No. 1, could very easily be called part of this sheet. Sheet No. 1, was made up and used as a separate sheet so that the field and office work could be expedited considerably as this sheet 5407, would have been a very large sheet. A search at low water was made for all rocks charted. There are no rocks sketched by the hydrographers on the boat sheet. Every rock shown on the smooth sheet has either a hydrographic or topographic location. Rocks awash in red on the boat sheet have been transferred from the chart.

Dangers.

Note: blue notes and ✓'s by JGL re- review H-5407

all references to review in blue, refer to review of - H-5407

Dangers

In general this is boulder country and caution should be used whenever navigating when the depths are very nearly the same as the draft of the launch. The principal rocks etc. are Big Tom, Cuban Ledge and the boulder East of Big Tom with a depth of about 2 ft. on it. There are numerous other rocks in East Chester and Pelham Bays. At the entrance to the unnamed creek at the NW end of Throgs Neck, Lat. 40-48.7, Long 73-48.1 there are several rocks as shown on the sheet. Some of these rocks are privately marked but others are unmarked.

Channels

In East Chester Bay there is a 7 foot channel to Red Buoy No.2, then 5 ft. to buoy No. 1, and then 7 & 9 ft. to the entrance of East Chester Creek. Caution is advised in navigating this bay as there are numerous rocks and reefs which are unmarked.

In Pelham Bay there is an unmarked channel of 7-8 ft. to the S.W. end of Hunters Island. From here the bottom shoals gradually to the head of the bay.

The unnamed creek at the northwest end of Throgs Neck has a privately marked and maintained channel with a depth of 4 ft. at the very narrow entrance marked by 2 buoys, with much deeper water inside the entrance. There are several rocks near this entrance, some are marked by privately established buoys and spindles. Unless one is familiar with this entrance extreme caution is advised.

Between Hart and City Islands there is a 16 ft. channel easily followed though unmarked.

There is a passage from East Chester Bay to Pelham Bay which goes under the bridge from City Island to Rodman Neck. The depth of water in this passage is much greater than the depths of water in either East Chester or Pelham Bays.

Additional work and development asked for by office.

The boat sheet was prepared in the office and 33 spots were marked for additional development or verification. These places were dragged where feasable and those not dragged were closely developed. Each place was investigated ~~xxxx~~. The following numbers refer to those shown in red ink on boat sheet.

1. Least depth found over Emerald Rock* is ~~11~~ 11½ ft. Pos. 36 Bday green. One half hour was spent feeling around this place for the shoalest depth. The 20 ft. sounding was not found but a 21 and 23 ft. soundings were found a little to the SE of the given position. This sheet shows 8 ft. near the given position of the 6 ft. sdg. 6 not carried forward. *see review par. 7, a, 3
2. These are rocky ledges.
3. The 17 ft. and 9 ft. sdgs were checked, the two six ft.* and the 4 ft. sdgs were not found although the area was closely developed. Verified by a 5. *carried forward See review, par. 6, b, 8) and 6, c, 6)
4. 11 ft. sdg. checked and other development called for done.
5. Additional development was done. The 9 ft. & 6 ft. sdgs. are now 10 & 7 ft. respectively. shown on sheet, originally with 1933 Work
6. Additional developmemnt was done. 4 ofthe critical sdgs were checked by sdgs taken in close proximity to the positions given. The 7* ft. sdg. in the middle of the blocked out area was not found. *see review par. 6, b, 11, 1 from 1560 c -
7. A few extra lines were run as called for.
8. Additional development failed to disclose the two 6 ft. sdgs given This sheet shows 8 & 10 ft. 3 Shoal soundings retained. from 1560 c both 6's carried forward See review par. 6, b, 12
9. Least depth of 6½ ft. found. 5½ from H-1560 c, see review par. 6, b, 13
10. Lines were split but shoaler depths were not found.
11. Rocky ledge symbol should be used. Rock awash verified and found in position given. The shoal soundings were not found but enough sdgs were taken to show that there are submerged rocks here and it is recommended that the shoaler soundings be retained. Shoaler soundings retained JGL

notes and ✓s in blue refer T. H5407 JGL

12.to 16 inclusive. Additional development was done here and the sdg. lines were run very close together.
17 All are rocky ledges.
18 The 5 ft. sdgs. could not be found we show 10 ft. & 7 ft. The Two 5's retained originate with 1933 work of H5407
19 1 ft. sounding verified by rodman standing on rock at low tide and topographer taking rodman on his rod. See topo sheet 6026. shown as *
20 Additional development was done as called for. The original critical sdgs are now obliterated on the sheet so do not know what the results were
21 The position of the rock awash etc. was verified.
All the additional work outlined as recommended by the previous Chief of Party in Pelham Bay and vicinity was done as called.for.
22 See hydro sheet field No. 1 H 5546
23 6 ft. sounding disproved by wire drag see 1-3 A day drag H 5546
24 See hydro sheet No. 1, rock was verified — H5546
25 12 ft. sounding was disproved see wire drag overlay for sheet1 — H5546
26 the 2 five foot sdgs are probably O.K. An attempt was made to drag this area but the drag hung up and two new shoals were found in close proximity to these two five foot sdgs which precluded any chance of drag ging this spot further. It is recommended that these sdgs be retained. Discussed in Rev. of H-5546 #25
27 Two attempts were made to locate this rock and get a sounding on it. On both attempts a 4 ft. drag hooked the rock but sdg failed to reveal its location. The cuts from the drag launches through the buoy aground go right through the charted position, however. Therefore it is believed that the position of the boulder is correctly charted and the depth must be something less than 2 ft. In view of the correctness of the reported position it is believed that the depth is probably correct also. accepted see Rev. Rpt.
28 The outer limits of Stepping Stones were located at low water. W.D. H5546
29 This spot was cleared with a 21½ ft. drag. [26 sounding of H 5078 (1934) retained. Xxxx.] Disproved by U.S.E. See Bp 28352 HWM 2/7/40
30 27 ft. was found by hydrography on the reported 26 ft. sdg. 27' plotted, Xxxx.
31 This spot was cleared with a 14 ft. drag [17 sounding from H-5078 (1934) retained. Xxxx.
32 the 24 ft. sdg. was verified. 24 plotted 25' from by, 25 shown. Xxxx.
33 Rocky ledge symbol should be used.

Comparison with chart 223 and previous surveys.

In general this survey agrees fairly well with chart 223. There are several shoaler sdgs. charted but ~~xxxxx~~ these were mostly from previous wire drag surveys and according to the instructions these places were not investigated greatly. In lat. 40 51 57 long. 73 47 35 this sheet shows a wrecked barge. This barge was grounded one night and attempts were made to float it. It isnot known whether this barge was actuall rem removed or not. Cuban Ledge and Big Tom in East Chester Bay are shown considerably differnet from the way they are charted. Lines were run as shown at H. W. and the rocks themselves were searched for at Low water. A rock charted in 40-51.7N Long 73-47.7 was not found but a new rock was located about 100 meters to the eastward. Likewise a rock charted in 40-51.95, 73-47.7 was not found but another one was found about 50 meter west. While it is known that this is pinnacle country yet it is not believed that there are 4 rocks here as a thorouhg search was made for all rocks at L.W.. It is recommeneded that the two positions as shown only be charted. The rocky area charted in Lat. 43-51-20 Long 73-48-58 sheet T 6026 is shown on this sheet as two detached rocks, pos. 50-53 CC day & 42-45 CC day. It is recommended that they be charted as 2 detached rocks The rocky area charted in 40-51.95 long. 73-47.3 is shown quite differen on this sheet. Sheet T 6026 shows ~~xxxxxx~~ in 40-48-35, 73-47-55, ~~xxxxx~~ ~~xxxxxxxxxxxxxxxxxxxxxxxxxx~~

Barge PLOTTED 73-77.55 long

Discussed in Review-Rpt retained. Xxxx.

a rock awash at 1/4 tide. This survey shows this as a submerged rock. It is recommended that the submerged rock be charted. At positions 36-39 CC day this sheet shows 1 rock, sheet T 6026 shows two rocks here. The low water line to the westward of triang ulation station Sweep is shown incorrectly on T 6026 but more nearly correct on chart 223. Several sounding lines are run over this low water area with depths of as much as 16 ft. over the supposed low water. It is recommended that this area be shown as now charted.

Tides

Tide reducers were obtained from the standard automatic tide gage maintained at Willetts Point, New York. All tide reducers were computed from the lists of hourly heights forwarded by the office.

Landmarks for charts.

This list of landmarks for charts has been submitted by H. A. Cotton, in 1933 andwith topographic sheets field letters A, B, and C, 1934 by this party.

Statistics.

Miles of sdgs.	401.7
Souhdings taken	13,208
Positions	4,118
Miles of wire drag	2.4
Wire drag positions	36

Wire Drag.

The wire drag strips are plttoed in pencil on the smooth sheet wherever there are not too many soundings, For the other places there is attached to the sheet a tracing overlay showing the wire drag strips.

I. E. Rittenburg, Lieut.,
Coast & Geodetic Survey.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ..5547

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.418..
Number of positions checked	..493.
Number of positions revised	....6.
Number of soundings recorded	13,208.
Number of soundings revised	...23.
Number of signals erroneously plotted or transferred	.....

Date: MARCH 13, 1934.

Verification by M.S. Gurnee, R.K. Chisholm — Time: 138 HRS, 12¾ HRS } 150¾ HRS.

Review by H.W. Murray, R.J. Christman — Time: 62 "
17 "

To: Mr. Bacon
From L. S. S.

Survey No. H 5547
T6026 + 6027

GEOGRAPHIC NAMES

NEW YORK

Date. Nov. 15, 1934

Chart No. 1213 + 223

Diagram No. 1213-3

Names underlined in red approved Dec 3, 1934 H. Bacon

additions Mar 13, 1935 HB.

*, Approved by the Division of Geographic Names, Department of Interior.

¢, Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
✓	---------	Davids Island ✓ USGB	✓		40°53.0' 73°46.3'
		Pelham Bay			40°52.0' 73° 48.0'
✓	----------	Hunter Island USGB	✓		40°52.5' 73°47.5' ✓
		Long Island Sound	✓		✓
✓	-------	Rodman Neck	✓		40°51.8' 73°48.1'
		East River	✓		
✓	---------	City Island	✓		40°50,8' 73°47.2'
		Whitestone Pt.	✓		
	East Chester Bay (one word per V.S. G.B. Decision)	EastChester Bay	✓		40°50.0' 73°49.0'
		New Rochelle	✓		
✓	----------	Throgs Neck USGB	✓		40°48.7' 73°48.5'
		Elm Pt.	✓		
✓	----------	Willets Pt. USGB	✓		40°47.7' 73°46.8'
		Manhasset Bay USGB	✓		
	----------	Little Bay (NOT INKED-MSG)			40°47.6' 73°47.4'
		Little Neck Bay	✓		
✓		Hart I ✓	✓		
✓		Pea I ✓	✓		40° 52.6' 73° 45.7'
✓		Glen Island	✓		✓
✓		Execution Rks	✓		✓
		Sands Pt. USGB	✓		
		Hewlett Pt. USGB	✓		

(M 100)

Mr. Ellis

FAC

Dec. 7, 1934

Division of Hydrography and Topography:

✓ Division of Charts:
E. P. Ellis

Tide Reducers are approved in
13 volumes of sounding records for

HYDROGRAPHIC SHEET 5547

Locality Eastchester Bay, East River and Long Island Sound, New York.

Chief of Party: I. E. Rittenburg in 1934
Plane of reference is mean low water reading
1.6 ft. on tide staff at Glen Cove
15.4 ft. below B.M. 1
4.8 ft. on T. S. at Willets Point
13.6 ft. below B. M. Serial No. 267

Height of mean high water above plane of reference is 7.3 feet at Glen Cove and 7.2 feet at Willets Point.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

Verification Report H5547 (1931)

I Conformity to Hydrographic Manual.

The records and work conform to the requirements as specified in the Hydrographic Manual except for the following:

1. Rocky bottom characteristic is entered in the records and on the smooth sheet as "Rk" instead of "rky". This is especially confusing due to the large number of pinnacle rocks on this sheet, where the notation "Rk" can properly be used. Cited in Rev. Hydro.
2. The notes on rocks are lettered in vertical letters and in greater detail than necessary.
3. For add'l remarks, see Rev., IP 1.

Reports called for in paragraph 16 of Rules for Verifying and Taking Hydrographic Sheets have all been received.

II Depth Curves.

The usual depth curves (0, 6, 12, 18, 30, 60, and 120 feet) are completely drawn on this sheet. The 30 foot depth curve on the shoal at (Lat 40° 53.5 Long 73° 45.4) had been left in pencil on H5547, but appears complete on H 5407 (1933). See III 2a below.

III Field and Office Plotting.

1. The smooth sheet was carefully compared with the Boat Sheet by visual inspection. 493 positions were checked, but the great majority of these were rocks and detached positions. Aside from the fact that a very hard pencil was used on the smooth sheet, resulting in digging into and grooving the paper, the field plotting was well executed. Only six positions were revised.

2. All the shoal developments in the area covered by H5407 (1933) were transferred in red to that sheet by the verifier, and the curves drawn thereon and then transferred back to H5547.

a. In the case of the shoal at (Lat 40° 53.5 Long 73° 45.4) it was difficult to draw the 30 ft. curves on H5547 in agreement with H5407,

due to a one and two foot difference of soundings. This curve has been left in pencil on H5547.

b. A one foot depth appears on the shoal development at (Lat. 40°-52.6 Long 73°-45.7) pos. ~~173~~ 173 E. This sounding has not been plotted as a rock because ~~an islet~~ and ledge ~~is~~ shown at this location on H5407, have 3/4 ft at M.L.W.

3. The wrecked steamer schooner and note relative thereto in the vicinity of Execution Rocks (Lat. 40°-52.8 Long 73°-44.3) were transferred to H5547 from T-6027 by the verifier.

IV Junctions.

Junctions have been made by the verifier with the following:

a. H-5545 (1934) - junction added to H5545: agreement satisfactory.

b. H-5413a (1933) - added to H5547: agreement satisfactory.

c. *H-5407 (1933) - applied to H5407, as well as all shoal developments and additional work called for in this area: Agreement satisfactory - see D.R. page 2 and V 7 for remarks on agreement of additional work.

d. *H5333 (1933) - applied to H5547: agreement generally satisfactory *

e. H-5078 WA (1930) - applied to H5547: agreement satisfactory except as noted in paragraph V 11 below. Proportional dividers used.

f. H 1732a (1914) - applied to H5547 with proportional dividers: agreement satisfactory

g. H 5546 (1934) Verification incomplete to date.

*. For additional remarks, see Rev. (¶ 3). Xcum.

V Remarks

1. A "13" foot sounding @ pos. 101S (Vol 6 page 26) at (Lat 40°-50.8 Long 73°46.7) may possibly be one fathom in error. (20 feet) Discussed in Rev. - Xcum.

2. Pos. ~~53x~~ 50x to 57x (Vol 7 page 44-) have been left in pencil pending review. These soundings, on a cross line, run two feet deeper than the average and if inked would result in a number of twelve foot spot curves. The greater depth may possibly be due to tides, and rejection is recommended. Sdg's removed, see ¶ 3 of Rev.

3. At pos. 9Z (Vol 7 page 62) - just south of O Cat (Lat 40°50.2 Long 73°-49.0) the records show the end of a stone breakwater 25 M wide and bare 2' at MLW. This has been plotted as a rock awash with the explanatory note "stone breakwater 25 M wide, bares 2 ft at MLW." This breakwater is not shown on T 6111, and the Boat Sheet shows merely a group of rocks awash. Single line of Rks added from B.S. Xcum. - Corresponds to L.W. line on T-6026

4. A 3½' sounding is recorded and inked at posn 74 BB (Vol 8 page 44) (Lat 40° 51.2 Long 73° 47.7). The records suggest that this sounding is on a concrete mooring base. Not added to sdg. jwm.

5. ~~All rocks noted as awash in any stage of tide up to 1½ ft are noted on the smooth sheet as awash at MHW~~

6. At position 43 J - (Vol 3 page 67), the boat scraped a rock (Lat 40° 47.8 Long 73° 47.95) A rock at this location is shown on T 6110 as awash at MW, but the Hydrographic records would make the rock have approx 3 - 4 ft @ MLW, assuming the boat to draw three feet. On the further assumption that the Boat might not have hit the apex of the rock, it is shown as awash at MW

7. The results of the additional work and development called for by the office, ~~and~~ are explained in the Descriptive Report, page 2. Further explanations follow: (the number in parentheses refers to the number in red on the boat sheet)

a. (8) No mention is made of the 3' shoal, checked only by a 7½ foot sounding. The 3' sounding is from the 1933 work of H5407 and is plotted on S. Sheet. JGL.

b. (15) a 6½ ft shoal on #1560a was not checked, carried forward see review par. 6, b, 3

c. (20) H5547 shows slightly deeper depths.

d. (2), (11), (33) Rocky ledge symbols have been added to H5407 and H5547 in these areas by the verifier

8. A rock ledge shoal appears on the additional work at (Lat 40° 53.3 Long 73° 45.2') at posn 109 to 114C (green). This has been transferred to H5407 ~~as yet, and awaits further disposition, especially as regards deeper soundings on H5407 within the shoal area~~.

9. To all rocks baring more than 7' (Tidal Range: 7.3') had been added a red height above M.W. in parentheses. No changes have been made on the Topographic Sheets

10. The low water line was removed where it conflicted with the Zero curve.

11. The following soundings from H 5078 WD (1930) are much shoaler than the surrounding depths; as noted:

Sounding on H 5078 WD	Aver. Depth on H5547	Location (Lat)	(Long)
19	30	40° 53.4	73° 44.05
19, 20, 21	23-30	53.5	44.2
13, 17, 18	22-27	53.3	44.2
9	16	50.6	46.3
13	17	50.7	46.4
33	44	50.0	46.8
27	32	50.2	46.7
38	44-51	49.0	47.0
38	51	48.1	47.8
26	38	48.1	48.4
15	19	48.5	49.2
17	22	48.5	49.1

12. Attention is invited to a shoal 10' sounding at 24 J day (Lat 40°-47.9 Long 73° 48.7) [margin: Discussed in Rev. Survey]

13. Attention is invited to the poor agreement of ~~108-111~~ 109-110 l day (Lat 40° 49.2 Long 73° 47.8). Rejection of ~~108-110~~ 109-110 l is recommended. ~~The recorded bearing as plotted is about 65° (arc) west of the recorded course~~. OK. Hersey; line removed.

14. Wire drag work has not been verified, and has been left in pencil — Overlays attached to Smooth Sheet. [margin: Verified, Hersey.]

15. Air Photo Compilation T-5089 is the only Air Photo Sheet received for this area, and it has not been verified. Comparison has been made with it, however, and the only apparent difference is a dock just west of ⊙ Community 1932, which dock appears on H5547, but not on T-5089. [margin: will be compared when air sheet covering this area has been received, Hersey] [left margin: A.P. will be compared when available — Hersey]
The Topo Sheets in the area are T 6025, 6026, 6027, 6109, 6110, 6111. ✓

16. Mr. R. K. Chisholm prepared the tracing for the transfer of shoal soundings from this sheet to H5407. ✓

Respectfully Submitted
Mark S. Gurnee
VERIFIER

March 14, 1935

Verifier's Report on Wire Drag H-5547.

Field party plotted a number of strips directly on the hydrographic sheet. These were inked by the verifier where they did not interfere with the hydrography. Overlays accompany the descriptive report for the remainder of the strips.

Position 5C (red) has a reduced sounding of 5 feet but it was plotted as 4½ feet sounding because of the 4½ ft. effective depth.

June 7, 1935 Submitted

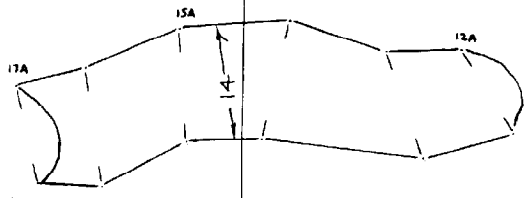
James Carmick

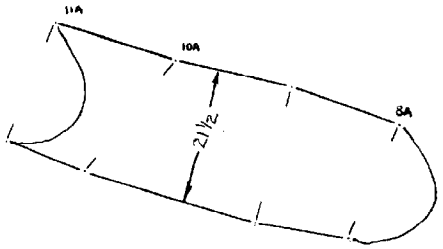
73-49

73-48

40-49

4





40-48

73-49

73-48

To Accompany H-5547

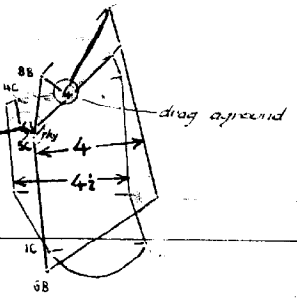
73 - 48

73 - 47

40-51

40-51

Detached Sdg of 5 feet obtained here which is plotted on smooth sheet.



40 30

40-50

73 - 48

73 - 47

To accompany H-5547

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5547 (1934) - FIELD NO. 5407

East Chester Bay, Long Island Sound, New York
Surveyed June - August, 1934
Instructions dated March 23, 1933 (N. A. Cotton)
June 13, 1934 (I. E. Rittenburg)

Hand Lead Soundings. 3-Point Control on Shore Signals.
Improvised Wire Drag.

Chief of Party - I. E. Rittenburg.
Surveyed by - M. D. Cooper and W. C. Huebner.
Protracted and Soundings plotted by - A. E. Incledon.
Verified and Inked by - Mark S. Gurnee.

1. Condition of Records.

The records are neat and legible but do not conform to the requirements of the Hydrographic Manual in that:

a. The note pertaining to plotting and checking of topographic signals and triangulation stations was shown on the smooth sheet by a combined form: "Signals plotted by _____" and "Signals checked by _____." While the note undoubtedly refers to both types of signals, it would eliminate doubt if the process had been indicated individually in accordance with the usual form or stamp for such matters.

b. Degree and minute symbols were not shown on latitude and longitude values. These were added in the office.

c. Confusion resulted in plotting and verifying bottom characteristics for the abbreviation "Rk." or "Rock" was frequently recorded after soundings depicting little or no change in bottom. In such cases, the term "rky." should have been recorded.

The "Descriptive Report" in general is satisfactory. However, each item under "Comparison with Chart 223 and previous surveys" should have been accorded a separate paragraph and several items of interest might have been added under this heading. (See 7b(2) of this review re. one omission).

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project except as noted in paragraphs 3, 5 and 9 of this review.

3. Sounding Line Crossings.

Agreement of such cross lines as were run or result from the work is within 1 to 2 feet. However, greater differences occur in several areas, the more important of which are soundings of line 50 to 57x (blue) in the vicinity of lat. 40° 49.5', long. 73° 47.8', which varied 1 to 3 feet deeper than the main system of lines and caused illogical variations in the depth curves. Inasmuch as the area in question is relatively flat and adequately covered by the main system of lines, soundings on the cross line are not essential and have been removed from the sheet. Soundings of line 109 to 110L, blue (lat. 40° 49.2', long. 73° 47.8') varied 2 to 4 feet deeper than the soundings on either side. Comparison of depths in this area with those of H-1569 (1883-86) shows changes of $\frac{1}{2}$ to $1\frac{1}{2}$ feet but not 2 to 4 feet. The affected soundings were removed from the sheet.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn within the area of the present survey.

5. Junctions with Adjacent Surveys.

a. The junction on the northeast with H-5413a (1933) and H-5545 (1934) as well as on the southwest with H-5333 (1933) is satisfactory.

b. The junction on the northeast with H-1732a (1914) as prescribed in the instructions for the project is satisfactory.

c. The junction on the north with H-5407 (1933) as well as a complete review of the several shoal developments in the general vicinity of Davids I., which is essentially additional work on H-5407 (1933), although plotted on the present survey, will be considered in the review of that sheet.

d. The junction on the southeast with H-5546 (1934) and the results of the wire drag work shown on the present survey which falls within the limits of H-5546 (1934), will be considered in the review of that survey.

e. In lat. 40° 51.7', long. 73° 48.9' (southeastward of bridge) a fair junction may be made with U. S. Army Engineers' surveys (Bp. 21351, 1927 and 27298, 1932), the inability to effect a good junction being due to sparse hydrography on both surveys.

6. Comparison with Prior Surveys.

a. H-1 (1837), H-4 (1836-37),
H-2 (1837), H-5 (1836-37).
H-3 (1836-37),

The above sheets actually constitute but one survey of the area envolved. Each sheet contains a large overlap from some or all of the others, but as plotted appears as though all the work on each was original. Considering the time elapsed between these surveys and the present survey, and the fact that they represent the first surveys executed by this Bureau when methods and equipment were in the developmental stage, they are generally in fair agreement with the present survey, although differences of 1 to 3 feet or more occur frequently. In this connection, the shoal indicated by the 9 and 11 foot sounding (charted) in lat. 40° 51.1', long. 73° 46.8' and originating with H-1 (1837) is of considerable area and falls in depths of 11 and 14 feet, respectively, on the present survey. However, comparison of soundings in the immediate vicinity with H-1560b (1883), H-1560c (1894) and the present survey indicates a gradual deepening of from 1 to 3 feet and the 9 and 11 foot soundings should be ignored in future chartings.

b. H-67 (1837-41).

Soundings of this survey to the westward of Throngs Neck vary 1 to 20 feet deeper in some areas and 1 to 5 feet shoaler in others than soundings of the present survey. However, many areas are practically unchanged in depth and a remarkable agreement in depth exists with most of the soundings transferred to the present survey from wire drag surveys in this vicinity. H-67 (1837-41) should be superseded by the present survey for charting purposes.

c. H-580 (1856).

Soundings of this survey to the westward of Throngs Neck vary from 1 to 3 feet shoaler than those of the present survey in some areas and 1 to 27 feet deeper in others. A few spots, however, are unchanged. Several shoal soundings were obtained on this survey which were not verified in the sounding records due to an inadequate system of indexing. However, a study of these soundings and their immediate vicinities on other surveys in this area reveals no necessity for any retentions. For example, the 24 foot sounding in lat. 40° 48.4', long. 73° 49.4' and the 26 foot sounding in lat. 40° 48.0', long. 73° 48.6' (both charted) were investigated on the present survey and depths of 25 and 27 feet, respectively, obtained close by. In view of the time elapsed between the two surveys and the probability of small changes in depth, the depths indicated on the present survey should be given preference in charting.

d. H-1560a (1883-06), H-1560b (1882) H-1560c (1894) and H-2223a (1912).

Soundings of the above surveys are generally in good agreement with those of the present survey although differences of 1 to 3 feet occur frequently, soundings of H-1560c (1894) and H-1560b (1882) usually being shoaler than those of the present survey. This is especially true in the area northward and eastward of City Island. In connection with H-1560b (1882), the $3\frac{1}{2}$ foot sounding (3 charted) in lat. 40° 52.1', long. 73° 47.4' (line 36 to 37E, red) is incorrectly plotted in respect to time interval. The sounding has been transferred to the present survey in its correct position which is 25 m. to the northeastward of the charted position. The 11 foot sounding from H-1560c (1894) (charted) in lat. 40° 51.2', long. 73° 47.7' falls in depths of about 13 feet on the present survey. According to the old sounding records, a 14 foot sounding was obtained just northward and a 13 foot (unplotted) just southward of the 11 foot sounding has been retained.

Discrepancies noted in connection with H-1560a (1883-06) are as follows:

(1) Pos. 34j (red) in lat. 40° 50.3', long. 73° 47.9' disagrees with the recorded time interval by 120 m. A change of 5° in the recorded left angle brings the position into good agreement and a result the 6 foot sounding (charted) of line 33 to 34j transferred to the present survey is shown 13 m. northeast of its original plotted position.

(2) The rocky reef (charted as a rock awash) in lat. 40° 51.9', long. 73° 47.5' and originating with this survey was located during a zero foot tide (pos. 21t, red). This rock was not found on the present survey but two rocks (bare at MLW) were found about 70 m. southwestward of the above rock; one during a 2 foot tide (pos. 79-80EE, blue), and the other during a $\frac{1}{2}$ foot tide (pos. 7RR, blue). The latter two rocks were not located on the prior survey. While it is significant that the hydrographers of both surveys were in the vicinity during similar tidal conditions and neither saw the rock or rocks located on the other survey and that a 2° change in the recorded left angle of pos. 21t (1883 survey) brings the above rock in excellent agreement in position with the southernmost rock on the present survey, the evidence is not considered sufficient for disproval of the rock and in view of the irregularity of the area involved, the excellent agreement of pos. 21t with recorded time interval and course and the possibility that the rock may be slightly covered at M. L. W., the rock has been retained.

(3) The 11 foot sounding (charted) in lat. 40° 52.0', long. 73° 47.2' (line 71 to 72e, red) falls between a 16 and 18 foot sounding on the present survey and appears to be 1 fm. too shoal. However, in view of the small shoaling indication on the present survey and lack of specific investigation, the sounding has been carried forward in color.

(4) In the vicinity of lat. 40° 51.9', long. 73° 47.3'; the 4½ foot sounding of line 5 to 6t, red (charted as a sunken rock) is incorrectly plotted with respect to depth. The correct sounding is 5½ feet and has been so transferred to the present survey. In addition, the 3½ foot sounding of line 4 to 5t, red (just south of the above sounding) was obtained on a ledge (from records) but is not appropriately indicated on the smooth sheet. The 3½ has been transferred to the present survey accompanied by the notation "Rk."

(5) The 5½ foot sounding (charted as 5) in lat. 40° 51.7', long. 73° 46.8' (pos. 9S, red) was obtained on a rock, which notation (Rk.) was not indicated on the smooth sheet. It was further confirmed by a 6½ foot sounding (pos. 10S, not plotted). The least depth shown here on the present survey is 18 feet and is a single sounding on line. The rock is marked by a buoy which is referred to in the "Buoy List" as being in 14 feet of water. The 5½ has been transferred to the present survey accompanied by the notation "Rk."

(6) The single 12 foot sounding (charted) in lat. 40° 51.6', long. 73° 47.5' (line 45 to 46a, red) falls in depths of about 23 feet on the present survey. General agreement of soundings in this vicinity is fair but in view of the insufficient development on H-5547 (1934) and the general rocky character of the area, it was considered advisable to retain the 12 which should be used in future charting.

(7) A number of rocks shown on H-1560a (1883-1906) originate with T-1515a (1882-83). Discrepancies noted in comparison with the present survey which cannot properly be disposed of in the review of the contemporary topographic surveys are as follows:

(a) The rocky reef (charted as a rock awash) in lat. 40° 51.3', long. 73° 48.4' and originating with T-1515a (1882-83) was not found on the present survey but falls approximately midway between one rock located about 45 m. to the NNE (pos. 3RR, blue) and two rocks located about 80 m. to the ESE (positions 1 and 2RR, blue). Since the hydrographer of the present survey spent 14 minutes in this vicinity during a ½ foot tide, it seems reasonably certain that in going from position 1 and 2RR to 3RR, he would pass near this rock and would have observed it, if it existed. It is quite probable that this rock and the rock at pos. 3RR are one and the same

rock. The delineation on the present survey should be accepted for future charting.

(b) In the general vicinity of Pelham Bay, the numerous rocks on H-1560a (1883-06) are obviously incorrectly transferred from T-1515a (1882-83) for comparison of the two surveys reveals numerous consistent differences in geographic position, amounting in some cases to 25 m. in a due east and west direction and 20 m. in a north and south direction. Differences are also noted between the rocks on the above two surveys and the rocks on the present survey, such differences varying from 25 to 50 m. In view of the painstaking nature of the work on the present survey, particularly in the matter of locating rocks, the delineation shown on the present survey should be accepted for future charting.

e. H-1569 (1883-86), H-1569a (1913) and H-1569b (1914).

(1) A comparison between H-1569 (1883-86) and the present survey on the southwest reveals general changes in depths and location of shoals. In addition, the 1883-86 survey contains no critical soundings or shoals not adequately covered by the present survey or other wire drag surveys discussed in this review and should be superseded by H-5547 (1934) for charting purposes.

(2) A comparison of soundings between H-1569a (1913) and the present survey in the shoal area off Whitestone Point on the southwestward indicates considerable changes in depth and in which the 30 foot curve as defined on the 1913 survey has receded about 125 m. inshore. In this connection, the 26 foot sounding (charted) originating with this survey and marking the outer limits of this shoal area should be disregarded in future chartings.

(3) The few soundings of H-1569b (1914) in the vicinity of lat. 40° 48.1', long. 73° 48.0' indicate a general deepening of approximately 1 to 3 feet in this area.

f. H-1700 (1886-04).

Soundings of this survey in the vicinity of Execution Rocks which fall within the limits of the present survey are generally in close agreement with the present survey in most areas. However, in the vicinity of lat. 40° 53.1', long. 73° 44.2', several shoal spots enclosed by the 18 foot curve have shifted about 50 m. in an easterly direction. The single 10 and 11 foot shoal soundings

(charted) in lat. 40° 52.9', long. 73° 44.2', which fall near undeveloped shoal indications on the present survey have been carried forward. In this connection, these shoal soundings could not be verified in the sounding records due to the congestion of detail on H-1700 (1886-04).

g. H-1732 (1886) and H-2607 (1902).

The few soundings of the above surveys which fall within the limits of the present survey in the vicinity of Execution Rocks and Sands Point are generally in good agreement.

h. H-2914 W. D. (1907), H-3778 W. D. (1915) and H-5078 W. D. (1930).

Soundings of the above surveys, as well as groundings on H-5078 W. D. (1930) have been carried forward to the present survey in color. However, in a number of cases, general shoaling subsequent to the above surveys is amply indicated by soundings on the present survey, the depths on which correspond to or are shoaler than those of the wire drag surveys. In such cases, no transfer was made, as for example the 19 foot sounding of H-5078 W. D. (1930) in lat. 40° 48.5', long. 73° 49.5', which falls in depths of about 12 feet on the present survey. Aside from several cases of shoaling adequately covered on the present survey, H-5547 (1934) contains no critical soundings that conflict with the effective drag depths on the above wire drag surveys.

7. Comparison with Chart No. 222 (Corrected to December 12, 1933) and 223 (Corrected to February 1, 1934).

a. Hydrography.

Within the area of the present survey, the above charts are based on surveys discussed in the foregoing paragraphs and from several miscellaneous sources (chart 223 only), dispositions of which are as follows:

(1) No authority could be found for the charted 5 foot sounding (lat. 40° 50.8', long. 73° 48.6') falling in depths of 7½ feet on the present survey and which was first charted on Chart No. 272 (Ed. of 1915). However, comparison of soundings on prior surveys in this vicinity reveals a small but gradual deepening resulting in a 2 foot change, when compared with the present survey. The 5 foot sounding should be ignored in future chartings.

(2) No authority could be found for the charted cluster of four rocks awash surrounding the rock (Big Tom) in lat. 40° 50.1', long. 73° 47.4'. However, a considerable number of rocks

awash were shown here on Standard 272 (1917) but on the subsequent Standard (No. 223, 1922) the number was reduced to four. The rocks awash are probably a generalization of the rocky character of the area, and as the area has been well sounded on the present survey and a rock awash at M. L. W. located, the charted delineation should be superseded by the delineation on the present survey.

(3) The 2 foot sounding charted in lat. 40° 50.1', long. 73° 47.3' falling in depths of about 7 feet on the present survey originates with Chart Letter No. 39 (1923) and is the result of an investigation authorized by this Bureau for a reported rock. The position of the rock was verified on the present survey by wire dragging but no sounding could be obtained on it with the leadline. Since the original charted position is accurate, it is assumed that the sounding is correct, which sounding has been shown on the present survey accompanied by the notation "Rk." (See D. R., page 2).

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(4) The rock awash (bare at L. W.) charted in lat. 40° 51.7', long. 73° 47.6' originates with Chart Letter No. 445 (1913) and was located by angles based on known rocks and a tangent to an island. It falls about 70 m. due west of a rock (awash M. L. W.) located on the present survey during a ½ foot tide which latter position agrees favorably with a small cluster of rocks located on H-1 (1837) that were never charted. The reported rock, as well as the other two rocks discussed above are undoubtedly one and the same rock. The delineation on the present survey should be accepted for charting purposes.

(5) No authority could be found for the westernmost of the group of rocks in lat. 40° 51.1', long. 73° 48.4'. The rock falls in depths of 6 feet on the present survey and was first charted on Chart 272 (Ed. of 1917). However, the hydrographer of the present survey was in the vicinity during a ½ foot tide, located considerable detail about 50 m. to the eastward but observed no rock to the westward. The delineation on the present survey should supersede previous chartings in this area.

(6) The charted group of piles (inferred) in lat. 40° 47.6', long. 73° 47.6', as well as what appears to be a group of 2 bare rocks (250 m. SSW), originate with T-1725 (1885-86) and were not found on the present survey, contemporary topographic nor aerial survey. The piling is probably non-

existent at this time for a line of soundings (pos. 44 to 45D, blue) was run directly over the piling during a tide of 1 to 1½ feet and no mention of them made. This piling should be ignored in future chartings. The group of bare rocks falls about 30 m. outside the zero foot curve (15 m. outside the topographic low water line) in depths of about 1½ feet. These rocks may be piles which have since disappeared. In view of their uncertain character and their relative unimportance, they may be disregarded in future charting.

(7) The 10 foot sounding originating with H-1700 (1886-04) in lat. 40° 52.9', long. 73° 44.2' is incorrectly charted in position. Its correct position is approximately 30 m. south of the position now charted. Its correct position is shown on H-5547 (1934).

b. Aids to Navigation.

Aids to navigation located on the present survey vary as much as 80 m. (except buoy N2 discussed below) from their charted positions but adequately mark the features intended except as follows:

(1) Buoy N2 is located about 100 meters SW of its charted position. Attention is invited to the fact that the bottom of this part of East Chester Bay has changed and a straighter, deeper channel would be available with an obstruction buoy placed just south of the "rock awash at extreme low tides," lat. 40° 51.3', long. 73° 48.55'.

(2) Two beacons are charted at the entrance to the unnamed creek north of Throgs Neck, lat. 40° 48.7', long. 73° 48.2' on authority of L. H. N. M. No. 21 of 1930. The Descriptive Report (page 2) notes that the entrance to this creek is marked by two privately maintained buoys but makes no mention of the beacons.

⊙BAT falls at pro. of one Beacon + a black box is shown on HJT47 near entrance

c. Controlling Depths in Channels.

The charted depth of 13 feet in that portion of the dredged channel at Willets Point falling within the limits of the present survey (lat. 40° 47.7', long. 73° 47.0') agrees favorably with depths shown on the present survey, however shoaling of ½ to 1 foot is indicated near the southwestern limits.

8. Field Plotting.

Field protracting and plotting were very accurate and conform to the requirements of the Hydrographic manual.

9. Doubtful Soundings.

The 13 foot sounding (pos. 101S, blue) in lat. 40° 50.9', long. 73° 46.6' and the 10 foot (pos. 24J, blue) in lat. 40° 47.9', long. 73° 48.6', falling in depths of 18 and 20 feet, respectively, on the present survey, may be leadsmen's errors and should have been investigated in the field. However, in view of the possibility that they may have been obtained on obstructions, they have been retained.

10. Additional Field Work Recommended.

The present survey, with the indicated additions in color from previous surveys, is complete and no additional work is necessary. However, when work is resumed in this locality, an examination should be made of the following:

a. All rocks and soundings transferred from previous surveys which are shown on the present survey in purple, the more important of which are:

(1) The 5½ foot sounding discussed in par. 6d(5), this review.

(2) The 11 foot sounding in lat. 40° 52.0', long. 73° 47.2' originating with H-1560a (1883-06) and discussed in paragraph 6d(3) of this review.

b. A closer examination of the area between Execution Rocks Lighthouse and the transferred 10 foot drag grounding about 560 m. north by eastward, which grounding represents the southern limits of wire drag work (H-5078 W. D., 1930) in this vicinity. In this connection, attention is called to the uncertainty existing in the character of the area between Execution Rocks Lighthouse and the rocks awash about 150 m. to the northward, and which has been discussed in detail in paragraph 6b(2) of the review of H-5546 (1934).

c. An examination of the doubtful 10 and 13 foot soundings discussed in paragraph 9 of this review.

d. A re-examination of the following obstructions (charted) carried forward from previous wire drag surveys. The general depths on the present survey in these vicinities do not verify the drag depths and it is possible that the wreck and obstructions are no longer existent.

(1) A 13 foot sounding "wreck" in lat. 40° 50.7', long. 73° 46.45'.

(2) A 9 foot "Obs." in lat. 40° 50.63', long. 73° 46.4'.

(3) A 26 foot "Obs." in lat. 40° 48.13', long. 73° 48.5'. Disproved by U.S.E. See Bp. 2835R (1935) H.W.M. 3/7/40

The last was examined during the present survey and passed over with a drag set at an effective depth of 21½ feet. This does not disprove the continued existence of the obstruction at 26 feet. A drag set at or near the general depth in the vicinity, which is 38 feet, should have been used.

e. An examination of the 12 foot sounding discussed in paragraph 6d(6) of this review.

f. The 9½ foot sounding of the present survey in lat. 40° 51.56', long. 73° 47.6', which falls in depths of 13 to 21 feet and close by a 12 foot shoal sounding on H-1560a (1883-06) should be further developed.

11. Superseding Previous Surveys.

Within the area covered, H-5547 (1934) with the indicated additions from prior surveys supersedes the following surveys for charting purposes:

H- 1	(1837)	in part.	H-1560b	(1882)	entirely.
H- 2	(1837)	" "	H-1560c	(1894)	in part.
H- 3	(1836-37)	" "	H-1569	(1883-86)	" "
H- 4	(1836-37)	" "	H-1569a	(1913)	entirely.
H- 5	(1836-37)	" "	H-1569b	(1914)	"
H- 67	(1837-41)	" "	H-1700	(1886-04)	in part.
H- 580	(1856)	" "	H-1732	(1886)	" "
H-1560a	(1883-06)	" "	H-2607	(1902)	" "
			H-2223a	(1912)	" "

12. Reviewed by - Harold W. Murray, April 11, 1935, and R. J. Christman, August 2, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, C. K. Green
Chief, Section of Field Records.

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G. Rude
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Applied to chart 222 2.M.A. Feb. 1936 25 Jan 13, 1936

" " " 223 & 1213 - Apl & May - 1936 - H.S.D.

" " " " reexamined June 16, 1949 RDG